

APPENDIX E



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

**75 Hawthorne Street
San Francisco, CA 94105-3901**

April 16, 1998

**Michael P. Kenny, Executive Officer
California Environmental Protection Agency
2020 L. Street
Sacramento, CA 95812**

Dear Mr. Kenny:

This letter is to approve the use of EMFAC7G for use in transportation plan and program conformity analyses addressing regional emissions in the state of California when it has been used in the air quality plan which establishes the relevant motor vehicle budgets.

Introduction and Background

You requested that EPA approve the use of EMFAC7G for use in conformity assessments in a letter dated July 17, 1997. The request specifically states that EMFAC7G should be used to assess conformity for transportation plans and programs when EMFAC7G has been used in the applicable air quality plan. The letter also states that EMFAC7G should not be used to demonstrate conformity where EMFAC7F was used in the applicable SIP nor be used for CO microscale project level analyses.

The EMFAC7G program was developed as an update to the EMFAC7F emission factor program in 1995. The model was then finalized in 1996 and recommended¹ for use, by the ARB, for development of motor vehicle emission inventories in California. The model was subsequently used by the South Coast Air Quality Management District (SCAQMD) and the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) in air quality plans developed in 1997. The 1997 SCAQMD Air Quality Management Plan contains motor vehicle emission budgets, developed using EMFAC7G, for carbon monoxide (CO), PM₁₀ (including NO_x and VOC as PM₁₀ precursors) and ozone (including VOC and NO_x as ozone precursors). At this time, both the submitted CO and PM₁₀ budgets are applicable for conformity purposes². The SJVUAPCD plan contains emission budgets for

¹ While ARB recommends that local air districts use EMFAC7G for use in California, it does not require use of EMFAC7G. In addition, EPA does not require that areas use EMFAC7G for air quality plan development.

² The ozone budgets are not yet applicable since approved motor vehicle year budgets (established in the 1994 air quality plan) are already in place. The 1997 ozone budgets will be applicable once the 1997 air quality plan is approved.

PM₁₀ and its precursors. These PM₁₀ budgets, also developed using EMFAC7G, are the only PM₁₀ budgets which have been submitted by the SJVUAPCD, and therefore should be used for conformity determinations.

Legal and Technical Basis for Approval

Section 93.111 of the Transportation Conformity rule defines the criteria and procedures which apply to the use of the emission factor models for conformity. This section states that

"The conformity determination must be based on the latest emission estimation model available. This criterion is satisfied if the most current version of the motor vehicle emissions model specified by EPA for use in the preparation or revision of implementation plans in that State or area is used for the conformity analysis. Where EMFAC is the motor vehicle emissions model used in preparing or revising the applicable implementation plan, new versions must be approved by EPA before they are used in the conformity analysis."

While you have indicated that you would like to ensure that Metropolitan Planning Organizations can use EMFAC7G for regional conformity analysis, they have raised several concerns regarding "approval" of a new version of EMFAC. These concerns are briefly summarized below:

- ARB would only like to see EMFAC7G used for conformity when it has been used to develop the applicable air quality plan. If EMFAC7G was approved by EPA as a 'replacement' emission factor model, MPOs would be required to use EMFAC7G in all conformity analyses. Therefore, new SIPs would need to be developed by all air districts in California, adopted by the State and approved by EPA to replace existing budgets developed using EMFAC7F. Until a district could replace these EMFAC7F budgets, MPOs would have a difficult time demonstrating conformity using EMFAC7G due to the mixing of EMFAC7F and EMFAC7G emission factors.
- ARB and Caltrans are recommending that EMFAC7G not be used for CO "hot spot" analyses due to the inclusion of regional correction factors in EMFAC7G which are not appropriate for use in specific transportation project assessments at the link or intersection level. Thus EMFAC7F should continue to be used to determine conformity at the project level, pending development of improved microscale emission modeling tools. EPA, ARB and Caltrans have agreed that improved microscale modeling tools will be investigated and developed in the next 2-3 years.

EPA concurs with these concerns, and agrees that, *for regional analyses*, mixing of EMFAC7F and EMFAC7G emission factors would raise problems with respect to consistency of modeling for air quality and transportation purposes. EPA views EMFAC7G as an optional, updated emission factor model that air districts can, but are not required, to

use for air quality plan development. We also understand that ARB and Caltrans plan to continue to work together to develop improved microscale modeling tools. Thus, EMFAC7G, similar to MOBILE5b, is an interim update to EMFAC. This finding is reflected in the guidance for future use of EMFAC7G, as summarized below.

Guidance for Use of EMFAC7G

1. No one is required to use EMFAC7G for development of air quality plans at any time or for any reason. While ARB recommends that local air districts use EMFAC7G for use in California, it does not require use of EMFAC7G. In addition, EPA does not require that areas use EMFAC7G for air quality plan development.
2. Any party that finds the use of EMFAC7G to be preferable (due to the ability of EMFAC7G to more easily and accurately model certain types of regional mobile source programs, or for any other reason) is permitted to use EMFAC7G, subject to paragraph 3 below.
3. Generally, a State or local agency wanting to use EMFAC7G must switch to it for all new analyses³ and submissions to EPA, except where comparisons to earlier analyses and submissions have practical consequences for program stringency or approvability. In such cases, either EMFAC7F should continue to be used for the new analysis for submission to EPA, or, the previous related analysis or submission should be redone using EMFAC7G and resubmitted. For demonstrating conformity with emission budgets, consistency should be maintained between the model used in the air quality plan demonstration and the conformity analyses.

Specifically:

- (i) For CO, PM₁₀, VOC and NO_x emissions, the use of EMFAC7G in an emissions budget analysis under conformity is allowed only if the emissions budget being tested was created with EMFAC7G.
- (ii) If emission budgets from the applicable air quality plan were developed using EMFAC7F, the agency must continue to use EMFAC7F to assess conformance with emission budgets.
- (iii) Once an EMFAC7G-based SIP revision which establishes or revises emissions budgets applicable to conformity determinations is submitted to EPA and those budgets become effective, subsequent conformity determinations under that SIP revision must also use EMFAC7G for regional emissions estimates.
- (iv) In some cases budgets will have been established in separate SIP

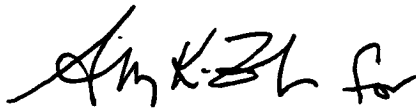
³ Except for CO "hot spot" project level conformity analyses.

demonstrations using both EMFAC7F and EMFAC7G. Conformity analyses completed in these areas must use both EMFAC7F and EMFAC7G to assess conformity. Budget comparisons should follow restrictions as described in i - iii above.

- (v) EMFAC7F should continue to be used for all CO "hot spot" project-level conformity analyses, pending development of improved microscale emission modeling tools.
- (vi) The use of EMFAC7G in a regional (emissions budget) analyses does not create a requirement to use EMFAC7F in all subsequent CO "hot spot" conformity analyses, and does not invalidate any regional modeling already performed using EMFAC7F.

The overall intent of this guidance is to provide the States and other users with maximum flexibility, avoiding unnecessary reworking of past analyses while also avoiding situations in which EMFAC7F-based and EMFAC7G-based analyses are inappropriately combined in ways that substantively impact program stringency or the approvability of submissions to EPA. We have tried to address the specific situations that we can foresee in the paragraphs above. If the State or local agencies foresee additional situations which could result in inconsistencies between EMFAC7F and EMFAC7G, we would encourage them to contact us to discuss the appropriate procedures that should be followed.

Sincerely,

A handwritten signature in black ink, appearing to read "David Howekamp", followed by a small "for" written in a cursive script.

David Howekamp, Director
Air Management Division

cc: D. Scovill, FHWA
R. O'Loughlin, FHWA
S. Stevens, DOT
D. Thompson, ARB
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